



City of Charlottesville

2025 Annual Water Quality Report Data



| Contaminants Detected | MCLG | MCL | City Water Result | # of Samples > AL | Range of Detections | Violation? | Typical Source of Contaminant |
|---|--------------|---------------------------|------------------------------|-------------------|---------------------|------------|--|
| Primary Standards- Potential Health Risks | | | | | | | |
| <i>Microbiological Compounds</i> | | | | | | | |
| Fecal Coliform Bacteria (as <i>E. coli</i>) ¹ | 0 | ² See footnote | 0 | n/a | n/a | No | Human and animal fecal waste |
| Turbidity (maximum single value) | n/a | 1 ³ | 0.22 NTU | n/a | n/a | No | Soil runoff |
| Turbidity (% of monthly samples below 0.3 NTU) | n/a | 95% | 100% | n/a | 100% | No | Soil runoff |
| <i>Radioactive Contaminants</i> | | | | | | | |
| Combined Radium ⁴ | 0 pCi/l | 5 pCi/l | ND | n/a | ND | No | Erosion of natural deposits |
| Gross Beta ^{4,5} | 0 pCi/l | 50 pCi/l | 1.2 pCi/l | n/a | 0.6—1.2 pCi/l | No | Decay of natural and man-made deposits |
| <i>Inorganic Compounds</i> | | | | | | | |
| Copper ⁶ | 1.3 ppm | 1.3 ppm (AL) | 0.03 ppm ⁷ | 0 | 0.02 – 0.08 ppm | No | Corrosion of household plumbing systems, erosion of natural deposits |
| Lead ⁶ | 0 ppb | 15 ppb (AL) | < 2.00 ppb ⁷ | 0 | < 2.00 – 151 ppb | No | Corrosion of household plumbing systems, erosion of natural deposits |
| Fluoride ⁸ | 4 ppm | 4 ppm | 0.72 ppm | n/a | 0.61—0.85 ppm | No | Water additive that promotes strong teeth |
| Barium | 2 ppm | 2 ppm | 0.02 ppm | n/a | ND—0.02 ppm | No | Discharge from drilling wastes; discharge from metal refineries; erosion of natural deposits |
| Nitrate | 10 ppm | 10 ppm | ND | n/a | ND | No | Runoff from fertilizer use, leaching from septic tanks, sewage |
| <i>Disinfectants and Disinfection By-Products</i> | | | | | | | |
| Total Trihalomethanes (TTHMs) | n/a | 80 ppb | 34 ppb ⁹ | n/a | 29—34 ppb | No | Byproduct from disinfection |
| Haloacetic Acid (HAAs) | n/a | 60 ppb | 21 ppb ⁹ | n/a | 17—21 ppb | No | Byproduct from disinfection |
| Free Residual Chlorine | MRDL = 4 ppm | MRDLG = 4 ppm | 1.3 ppm | n/a | 0.43—2.02 ppm | No | Water additive to control microbes (disinfectant) |
| Secondary Standards- Aesthetic Factors | | | | | | | |
| Chloride | n/a | 250 ppm | 9.9—13.3 ppm | - | - | No | Runoff/leaching of natural deposits |
| Iron | n/a | 0.3 ppm | <0.05 ppm | - | - | No | Runoff/leaching of natural deposits |
| Manganese | n/a | 0.05 ppm | <0.01 ppm | - | - | No | Runoff/leaching of natural deposits |
| pH | n/a | 6.5—8.5 | 7.5—7.6(monthly averages) | - | - | No | Runoff/leaching of natural deposits |
| Sulfate | n/a | 250 ppm | 12.2—18.5 ppm | - | - | No | Runoff/leaching of natural deposits |
| Total Dissolved Solids | n/a | 500 ppm | 87—105 ppm | - | - | No | Runoff/leaching of natural deposits |
| Other Parameters of Interest | | | | | | | |
| Alkalinity | n/a | n/a | 17—30 ppm (monthly averages) | - | - | n/a | Runoff/leaching of limestone minerals from soil and rock |
| Conductivity | n/a | n/a | 110—138 µmhos/cm | - | - | n/a | Runoff/leaching of natural deposits |
| Hardness | n/a | n/a | 27—40 ppm | - | - | n/a | Runoff/leaching of limestone minerals from soil and rock |
| Sodium | n/a | n/a | 8.67—9.29 ppm | - | - | n/a | Runoff/leaching of natural deposits |

¹ Unit of measurement for *E. coli* is the presence or absence of bacteria in a 100 mL sample.

² *E. coli* MCL: A routine sample and a repeat sample are total coliform positive, and at least one is also *E. coli* positive.

³ The MCL for turbidity is for no single measurement to exceed 1 NTU, and for 95% of all measurements to be below 0.3 NTU.

⁴ Sampled at all urban treatment plants in 2017, and sampling not required annually.

⁵ EPA considers 50 pCi/L to be the level of concern for beta particles.

⁶ Sampled in 2022 from select, relatively high-risk residences.

⁷ The value reported is the 90th percentile of all data collected. No samples exceeded the action level.

⁸ Compliance results for fluoride are from the annual inorganics sample. Range of results includes monthly split sample lab results.

⁹ TTHM and HAA results are averaged over four quarters at each sampling location to determine compliance with the MCL.

2025 Violation Information

During the 2025 monitoring period, we did not meet our monitoring requirement for coliform bacteria. Fifty samples a month are required for analysis and only 49 were analyzed in February of 2025. A Notice of Violation was issued by the Virginia Department of Health for the failure to collect the required number of water samples. State Health Officials believe that there is little need for concern about the safety of your water because past records show that our waterworks has had few documented problems with bacteriological contamination. The City of Charlottesville has confirmed that all required samples for March of 2025 were taken and there were no positive results for coliform bacteria. For more information, please contact: Westley Kern, Communication & Outreach Coordinator, Rivanna Water & Sewer Authority at (434) 977-2970 ext. 117.